



COFC

PTO/SB/21 (04-07)
Approved for use through 09/30/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/710,887	
	Filing Date	08/10/2004	
	First Named Inventor	Meng-Chi Liou	
	Art Unit	2871	
	Examiner Name	CHEN, WEN YING PATTY	
Total Number of Pages in This Submission	8	Attorney Docket Number	CPTP0002USA

ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	1. A copy of the Front Page of Patent.
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	2. A copy of supplemental Application Data Sheet submitted on 05/03/2007
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	3. A Copy of the filing receipt dated 06/20/2007
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	4. PTO/SB/44	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		
Remarks Request for Certificate of Correction of Office Mistake		

Certificate of Correction
AUG 29 2007

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	North America Intellectual Property Corporation		
Signature	<i>Winston Hsu</i>		
Printed name	Winston Hsu		
Date	AUG 24 2007	Reg. No.	41,526

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
Signature	<i>Josefina Wang</i>		
Typed or printed name	Josefina Wang	Date	AUG 24 2007

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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AUG 29 2007



PTO/SB/17 (05-07)

Approved for use through 05/31/2007. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL

For FY 2007

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 0.00

Complete if Known

Application Number	10/710,887
Filing Date	08/10/2004
First Named Inventor	Meng-Chi Liou
Examiner Name	CHEN, WEN YING PATTY
Art Unit	2871
Attorney Docket No.	CPTP0002USA

METHOD OF PAYMENT (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☒ Deposit Account Deposit Account Number: 50-3105 Deposit Account Name: North America Intellectual Property Corporation

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17☒ Credit any overpayments

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FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES**Fee Description**

Each claim over 20 (including Reissues)

Fee (\$)	Small Entity Fee (\$)
50	25
200	100
360	180

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
- 20 or HP =	x	=	

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
- 3 or HP =	x	=	

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims	Fee (\$)	Fee Paid (\$)

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x	=	

4. OTHER FEE(S)

Non-English Specification. \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Request for Certificate of Correction

Fees Paid (\$)

0

SUBMITTED BY

Signature	<u>Winston Hsu</u>	Registration No. (Attorney/Agent) 41,526	Telephone 3027291562
Name (Print/Type)	Winston Hsu	Date	AUG 24 2007

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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AUG 29 2007

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 7,248,319 B2
APPLICATION NO.: 10/710887
ISSUE DATE : Jul. 24, 2007
INVENTOR(S) : Meng-Chi Liou et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page, Item (75), Inventors,

the last name of the first named inventor should be corrected from "Liu" to --Liou --

MAILING ADDRESS OF SENDER (Please do not use customer number below):

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

AUG 29 2007



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. : US 7,248,319 B2 Issue Date : Jul. 24, 2007
Serial No. : 10/710,887 Filing Date : Aug. 10, 2004
Inventor : Meng-Chi Liou et al.
Docket No. : CPTP0002USA

Title: Multi-Domain vertical alignment liquid crystal display
panel comprising alternating and parallel slits and
protrusions

To: Commissioner for Patents
P.O. BOX 1450
Alexandria, VA 22313-1450

Subject: Request for Certificate of Correction of Office Mistake

Dear Sir:

The above-identified patent was issued on 07/24/2007. The applicant found that the last name of the first named inventor is incorrect on the front page of the patent (Attachment 1). Documents on record indicate this as an Office mistake of consequence.

The applicant hereby requests that a Certificate of Correction be issued under 37 CFR 1.322 to correct the last name of the first named inventor from "Liu" to "Liou" as correctly listed on the supplemental Application Data Sheet submitted on 05/03/2007 (Attachment 2) and filing receipt dated 06/20/2007 (Attachment 3).

AUG 29 2007

Respectfully submitted,

Winston Hsu

Date: AUG 24 2007

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

AUG 29 2007

Attachment 1



US007248319B2

(12) **United States Patent**
Liu et al.

(10) **Patent No.:** **US 7,248,319 B2**
(45) **Date of Patent:** **Jul. 24, 2007**

(54) **MULTI-DOMAIN VERTICAL ALIGNMENT LIQUID CRYSTAL DISPLAY PANEL COMPRISING ALTERNATING AND PARALLEL SLITS AND PROTRUSIONS**

(75) **Inventors:** Meng-Chi **Liu**, Tao-Yuan Hsien (TW); Chung-Ge Lin, Tao-Yuan (TW); Kuang-Shyang Lin, Tao-Yuan Hsien (TW); Fu-Yuan Shiau, Chia-I (TW)

(73) **Assignee:** Chunghwa Picture Tubes, Ltd., Taipei (TW)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 198 days.

(21) **Appl. No.:** 10/710,887

(22) **Filed:** Aug. 10, 2004

(65) **Prior Publication Data**
US 2005/0231672 A1 Oct. 20, 2005

(30) **Foreign Application Priority Data**
Apr. 16, 2004 (TW) 93110689 A

(51) **Int. Cl.**
G02F 1/1337 (2006.01)
G02F 1/1343 (2006.01)

(52) **U.S. Cl.** 349/129; 349/139; 349/143; 349/39

(58) **Field of Classification Search** 349/129
See application file for complete search history.

(56) **References Cited**

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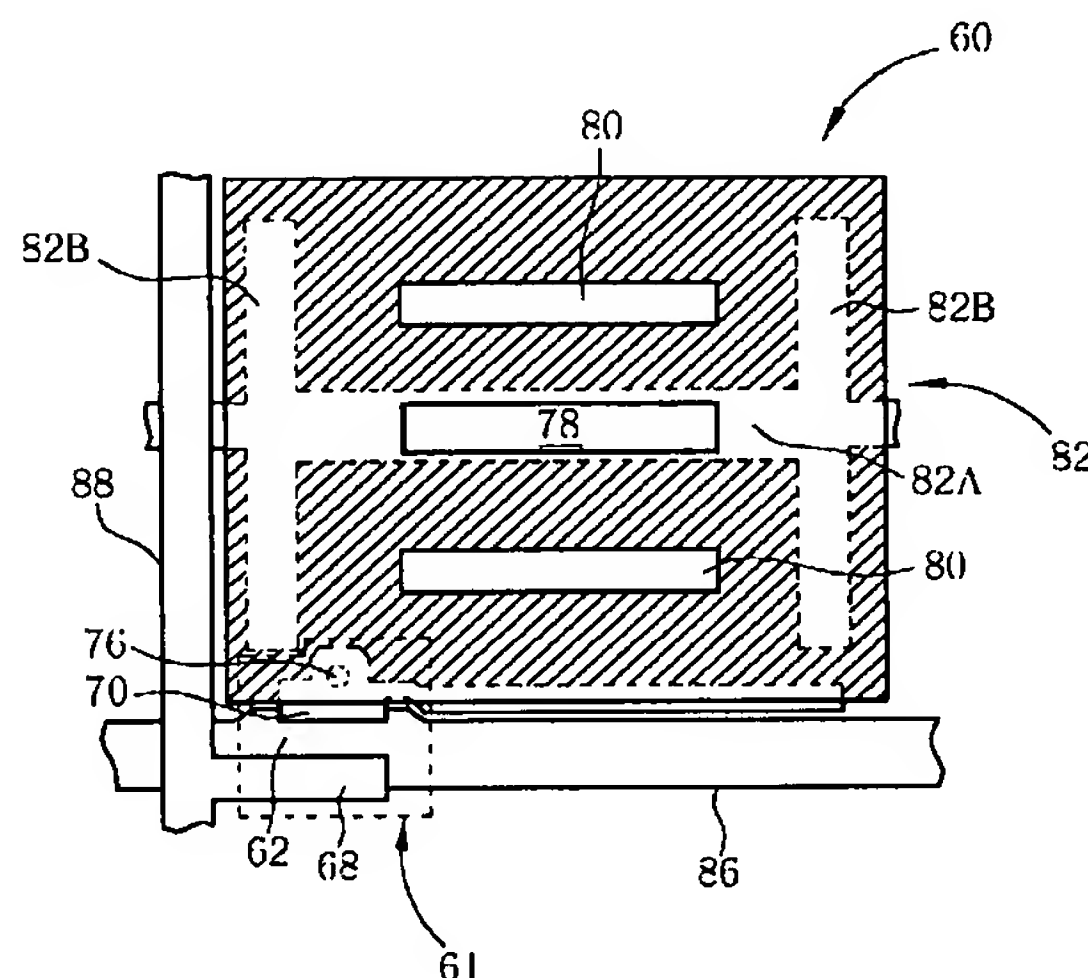
(Continued)

Primary Examiner—Andrew Schechter
Assistant Examiner—W. Patty Chen
(74) *Attorney, Agent, or Firm*—Winston Hsu

(57) **ABSTRACT**

A multi-domain vertical alignment liquid crystal display (MVA LCD) panel has a bottom substrate, a top substrate parallel to the bottom substrate, and a liquid crystal molecule layer filled in between. The panel further has a plurality of pixel regions arranged in arrays on the bottom substrate, a plurality of common lines traversing the pixel regions, a plurality of pixel electrodes positioned in each pixel region above the common lines, a plurality of slits positioned on each pixel electrode, a common electrode layer positioned on the surface of the top substrate, and a plurality of protrusions arranged parallel to and alternatively with the slits and positioned on the surface of the common electrode layer. The protrusions and the common lines are partially overlapped.

30 Claims, 9 Drawing Sheets



AUG 29 2007

APPLICATION DATA SHEET

Electronic Version v14

Stylesheet Version v14.0

Title of
Invention

MULTI-DOMAIN VERTICAL ALIGNMENT LIQUID CRYSTAL DISPLAY PANEL

Application Type: regular, utility

Attorney Docket Number: CPTP0002USA

Correspondence address:

Customer Number:

027765

027765

Priority Data:

Doc.No: 093110689; Country - TW; Date: 2004-04-16 us-priority-claimed

Inventors Information:

Inventor 1:

Applicant Authority Type: Inventor

Citizenship: TW

Given Name: Meng-Chi

Family Name: ~~Liu~~ Liou

City of Residence: Tao-Yuan Hsien

Country of Residence: TW

Address-1 of Mailing Address: 8F, No. 76, Min-You 5th St., Tao-Yuan City

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City of Mailing Address: Tao-Yuan Hsien

State of Mailing Address:

Postal Code of Mailing Address:

Country of Mailing Address: TW

Phone:

Fax:

E-mail:

Inventor 2:

Attachment 3



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
10/710,887	08/10/2004	2871	1570	CPTP0002USA	17	2

CONFIRMATION NO. 4886

27765
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION
P.O. BOX 506
MERRIFIELD, VA22116

CORRECTED FILING RECEIPT

Date Mailed: 06/20/2007

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Meng-Chi Liou, Tao-Yuan Hsien, TAIWAN;
Chung-Ge Lin, Tao-Yuan City, TAIWAN;
Kuang-Shyang Lin, Tao-Yuan Hsien, RWANDA;
Fu-Yuan Shiau, Chia-I City, TAIWAN;

Power of Attorney: The patent practitioners associated with Customer Number 027765

Domestic Priority data as claimed by applicant

Foreign Applications

TAIWAN 093110689 04/16/2004

If Required, Foreign Filing License Granted: 09/10/2004

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/710,887**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

Title

MULTI-DOMAIN VERTICAL ALIGNMENT LIQUID CRYSTAL DISPLAY PANEL
COMPRISING ALTERNATING AND PARALLEL SLITS AND PROJECTIONS

AUG 29 2007